

# Cookbook of Activities for Driver Education

MT CURRICULUM GUIDE

M 9

Objective: Size and speed of an object gains kinetic energy

## INGREDIENTS

3 marbles (Different sizes &/or weights)

Inclined plane (Hot Wheels Track)

Ruler

Milk carton

Record Sheet/Worksheet

## INSTRUCTIONS

1. Divide students into groups of four to six, find a station with an inclined plane. Get a ruler!
2. Have one of your group members get a carton and three differently sized marbles.
3. Place the carton top at the end line drawn on the inclined plane.
4. Take the smallest marble and roll it down the plane, without any added force.
5. After the marble falls into the milk carton and moves it, measure the distance the milk carton moved from the line. Repeat this process seven more times. Throw out the 3 lowest and 3 highest measurements and record the middle distance on the worksheet
6. Repeat step #5 with the medium marble.
7. Repeat step #5 with the large marble.
8. Answer the questions.

1. Which marble moved the carton the farthest, Why?
2. Which marble moved the carton the least, Why?
3. When, in the experiment, did the marble have potential energy?
4. When, in the experiment, did the marble have kinetic energy?
5. Which marble had the greatest potential energy?
6. Which marble had the least kinetic energy?

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